WASTE DELISTING PETITION
ARKONA ROAD LANDFILL

PART 1: DELISTING ADMINISTRATIVE INFORMATION

1 Name of Petitioner

a. Name of individual or firm sending petition:

Wayne Disposal, Inc.

b. Mailing address of individual or firm:

Street / P.O. Box: 49350 North I-94 Service Drive
City: Belleville
State: Michigan Zip code: 48111

Telephone Number: 734-699-6297
Fax Number: 734-697-9886

2 People to contact for additional information pertaining to this petition

a. Name	Title	Telephone Number
Steve Haton	Regulatory Specialist	734-699-6297
Terri Zick	Industrial Services Mgr	313-300-7401

b Mailing address of contact(s) if different from petitioner

Steve Haton
Street / P.O. Box: 49350 N. I-94 Service Drive
City: Belleville
State: Michigan Zip code: 48111

Terri Zick
Street / P.O. Box: 12482 Emerson Drive
City: Brighton
State: Michigan Zip code: 48116

3 Facility responsible for generating petitioned waste

a. Name of facility: Arkona Road Landfill

b. Location of facility:
Street / P.O. Box: 5400 Arkona Road
City: Milan
State: Michigan Zip code: 48160

c. RCRA ID number: MID 000718726

4 Location of petitioned waste

[X] Same as facility name and address given in item 3:

a. Name of facility: _____

b. Location of facility:

Street / P.O. Box: _____

City: _____

State: _____ Zip code: _____

c. RCRA ID number: _____

5 Describe the proposed delisting action:

Re-classify waste generated at the EQ Arkona Road Landfill to remove F006 waste listing based on the low physical hazard of the waste stream. Subsequent to de-listing, the waste stream will be managed as a liquid industrial waste under waste code 029L.

6 Provide a statement of the need and justification for the proposed action

The leachate generated at the Arkona Road Landfill exhibits neither characteristics of a hazardous waste as defined in 40 CFR 261.22-24, nor does it contain elevated concentrations of the constituents for which the F006 listing was developed (40 CFR 261.31, Appendix VII, Part 261).

The waste does not meet the definition of other listed waste codes as defined in 40 CFR 261.31 - 261.33. The waste also meets the treatment standards specified in 40 CFR Part 268.48 for all constituents associated with the F006 listing.

7 Signed Certification Statement

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for getting the information, I believe that the submitted information is true, accurate and complete. I am aware that there are ignificant penalties for sending false information, including the possibility of fine and imprisonment.

Signed by authorized representative _____

Typed Name: Steve Haton

Title: Regulatory Specialist

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PART 2: DELISTING WASTE AND WASTE MANAGEMENT INFORMATION

BASIS FOR LISTING THE WASTE

1 Which of the following scenarios best describes the petitioned waste?

[X] **a Petitioned waste is NOT a mixture of two or more listed hazardous wastes**

Common Name of Petitioned waste: F006 waste contained in landfill leachate

EPA Hazardous Waste ID Number: F006

Hazardous Waste Description:

Landfill leachate generated through contact with previously disposed F006 wastewater treatment sludge

[ ] **b Petitioned waste is a mixture of two or more listed hazardous wastes**

Common name of mixture: _____

For all listed wastes provide:

EPA Hazardous Waste ID Number: _____
Hazardous Waste Description: _____
Common Name: _____

[ ] **c Petitioned waste is a mixture of one or more solid non-hazardous wastes and one or more listed hazardous wastes, as described in 40 CFR 261.3(a)(2)(iii)-(iv)**

Common name of mixture: _____

Solid waste(s) common name(s) _____

For all listed wastes provide:

EPA Hazardous Waste ID Number: _____
Hazardous Waste Description: _____
Common Name: _____

[ ] **d Petitioned waste is generated from the treatment , storage or disposal of one or more listed hazardous wastes(or solid non-hazardous and listed hazardous waste mixture), as decribed in 40 CFR 261.3(c)(2)(i)**

Description of petitioned waste: _____

Common name of petitioned waste: _____

Solid waste(s) common name(s) _____

For all listed wastes provide:

EPA Hazardous Waste ID Number: _____
Hazardous Waste Description: _____
Common Name: _____

2 Describe the physical form of the petitioned waste (solid, liquid, etc)

Waste is a clear to gray liquid with less than 0.5% total suspended solids

3 For sludges/liquids; estimate based on waste analysis the percentage of solids (range)

Average solids content: 41 ppm (0.0004%)

History of Waste Generation

4 Which of the following describes the generation of the petitioned waste:

☐ **Waste has been generated in the past**

Provide year when waste was first generated _____

Provide year when waste generation ended *(if applicable)* _____

☒ **Waste is presently being generated**

Provide year when waste was first generated 1994

☐ **Waste will be generated in the future**

Volume of Petitioned Waste

5 Is the petition for a waste of fixed quantity?

☐ Yes (answer item 5a) ☒ No (Answer item 5b)

☐ **a. Petitioned waste is/will be a fixed quantity**

Estimated volume: _____ (Quantity) _____ (Unit of Measure)

☒ **b. Petitioned waste is/will be generated on a routine/continuous basis**

	Average quantity	Max quantity	Unit of Measure
Monthly volume	40,676	143,000	Gallons
Annual volume	488,111	790,665	Gallons

Describe the method of volume estimation:

Volumes based on historic waste generation obtained from MDEQ manifest database for the period beginning in January 2000 and ending December, 2004.

History of Waste Management

6 As appropriate, describe the present, past and proposed waste management methods for the petitioned waste

a. Present waste management methods and off-site facilities used (name address and waste management method)

Waste is currently hauled via licensed Part 111 hazardous waste transporter for treatment and disposal as a F006 listed hazardous waste at the EQ Resource Recovery facility (MID 060975844) located at 36345 Van Born Road, Romulus, MI. Minimum load volume has been 900 gallons, with a maximum volume of 10,000 gallons. Treatment residue is disposed at the EQ Wayne Disposal Subtitle C Landfill.

Name of facility: EQ Resource Recovery

Location of facility:
Street / P.O. Box: 36345 Van Born
City: Romulus
State: Michigan **Zip code:** 48174

RCRA ID number: MID 060975844

b. Past waste management methods and off-site facilities used (name address and waste management method)

Name of facility: Same as above

Location of facility:
Street / P.O. Box:
City:
State: **Zip code:**

RCRA ID number:

c. Proposed waste management methods and off-site facilities used (name address and waste management method)

De-listed leachate will be transported by a licensed Part 121 liquid industrial waste transporter to the following facility for wastewater treatment. Disposal of treatment residue will occur at a Type II landfill licensed under Part 115, P.A. 451, 1994 as amended

Name of facility: EQ Resource Recovery

Location of facility:
Street / P.O. Box: 36345 Van Born
City: Romulus
State: Michigan **Zip code:** 48174

RCRA ID number: MID 060975844

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PART 3: DELISTING PROCESS INFORMATION

General Operations at the Site

1 Describe facility business area(s) and operations. Include SIC codes

a. SIC code: 4212 **NAICS code:** 562111

The facility is a landfill which was certified closed in 1995 under the provisions of Part 111 of P.A. 451, 1994 as amended. Current activities are limited to post-closure care of the facility inclusive of leachate management, storm water management, groundwater monitoring and general maintenance

2 List and describe products manufactured at the facility

The Arkona Road Landfill is a closed solid waste (closure certified June, 1995). No manufacturing operations are conducted at the site

3 List and describe all wastes (including all hazardous wastes) generated at the facility

a. F006 hazardous waste leachate
b. _____
c. _____
d. _____

4 Describe your manufacturing and waste treatment areas and waste management units. Attach schematics showing the layout of the facility

a. Leachate pumping wells (23 wells + 1 trench) Figure 1
b. Leachate storage tank (100,000 gallon capacity) Figure 2
c. Leachate load-out (tanker loading station) Figure 3
d. Leachate control station (inclusive of alarm panels) Figure 1

5 Describe the regulatory status of all on-site waste treatment, storage and disposal units. Include a list of all hazardous waste permits and other permits issued under federal and state environmental statutes. Include permit numbers

a. Waste treatment: No permit required
b. Waste Storage: No permit required
c. Disposal Units: N/A

Permit number	Permit Type	Description of permit
MID 000718726	N/A	Waste Generation Identification number (LQG)

Contributing Manufacturing Processes

6 Describe and include schematics of all "pre-process" steps used to prepare materials for processing before primary manufacturing operations including surface and equipment preparations. Identify all pre-process material inputs and outputs

No manufacturing occurs at the generating facility. The waste generation process includes the following elements:

1. Pumping of leachate from 23 individual leachate extraction wells and 1 trench across the landfill
2. Transfer of pumped leachate through a forcemain to a contained 100,000 gallon storage tank
3. Storage of leachate until sufficient volume has accumulated to economically transport
4. Loading of leachate onto licensed tanker trucks for transport to a treatment/disposal facility

7 Provide a step-by-step description and schematic of each manufacturing process contributing to the petitioned waste. Include each process step, reactions occurring, flow rates and material inputs and outputs, as well as reaction intermediates and by-products. Identify and describe waste inputs and outputs on the schematic and show how each waste is managed

No manufacturing is conducted at the Arkona Road Landfill

8 Describe and identify on the schematic, exactly where the petitioned waste is generated (If generated by a manufacturing process)

No manufacturing is conducted at the Arkona Road Landfill

9 List and describe all process equipment including the function of each unit and the ranges of the operating parameters

1. Pumping of leachate from 23 individual leachate extraction wells and 1 extraction trench across the landfill
2. Transfer of pumped leachate through a forcemain to a contained 100,000 gallon storage tank
3. Storage of leachate until sufficient volume has accumulated to economically transport
4. Loading of leachate onto licensed tanker trucks for transport to a treatment/disposal facility

10 Describe all of your operating cycles (batch cycles, continuous operation, start-up, shut-down, maintenance, cleaning) on a daily, weekly or other period basis as appropriate. Identify periods when process wastes are not generated (plant shutdowns, routine maintenance)

Leachate is generated at an approximate rate of 1356 gallons per day. The minimum flow rate is approximately 1,200 gpd, and the maximum flow rate is approximately 2,000 gpd.

by timers and shut off through a current limit switch. When the pump(s) run dry, low amps trigger the limit switch and the pump shuts down.

Leachate is stored in a 100,000 gallon leachate storage tank until sufficient volume is available for economical transport. Tanker trucks are used to transport leachate off-site for disposal. Typically, between 9,000 and 10,000 gallons of leachate are transported per load.

Well operation: Dedicated pumps are installed in each of 23 leachate extraction wells at the site. Pumping occurs when sufficient liquid is present. Floats and/or transducers are used to detect liquid level and control pumping cycles.

Coyote controllers are used to operate the other 23 leachate extraction wells at the site. Floats are used to monitor liquid levels in the containment sumps and the well containment manholes, and to operate the extraction trench sump.

A transducer is also installed in the 100,000 gallon storage tank to facilitate tank level readings.

The pumping well network is protected from overflow and failure by an electrical intercept that activates in the following three conditions:

1 Liquid level in the manhole surrounding the individual wells triggers a high level float. Floats in the storage tank and containment sump will also trigger a high liquid level alarm that will trigger the electrical intercept.

2 Electrical disruption occurs (including electrical shorts, blown fuses, wire short, black-outs, brown-outs, shorts and power surges)

   Protection for the electrical system is provided by a surge protector and a back-up fuse
   An alternate power source is available to provide alarm capability during black-outs

3 A pressure switch is installed to prevent bursting pipes in the event of freezing lines

The electrical intercept will activate, cutting power to the pumps and tank system in the event that any of the above conditions occurs. The system must be manually re-set in the event of power shut-down

Tank System Operation: Leachate is pumped under pressure into a 100,000 gallon storage tank. The tank is protected against corrosion by a passive cathodic protection system using sacrifical zinc anodes. Release containment is provided by a concrete containment structure.

Leachate is pumped under pressure through concentric piping from the 100,000 gallon storage tank to the tanker load-out. A high level alarm at the load-out will result in the transfer pump being shut down.

A sump located in the containment structure automatically pumps leachate back into the tank should the float in the sump be activated by a high liquid level.

The tank is visually inspected on a daily basis, and is provided with both a float and transducer to monitor liquid levels. Should the liquid level reach 22 feet inside the tank, either the transducer, the float or both will trigger an alarm which results in the electricity to the well pumps being shut down such that additional liquid will not be pumped into the tank.

Containment Structure: The containment is provided with a sump which is monitored constantly through the use of a float device. Should the liquid level in the sump reach the float and/or transducer, an alarm is triggered and electricity to the leachate pumps is shut down such that additional liquids will not be introduced into the tank.

Alarm System Operation: There are 6 alarm functions in use at the Arkona Road Landfill to protect against unintended leachate releases at the site. These alarm features include the following:

1 Leachate well alarms
2 Tank alarms (shuts down power when high level is reached in tank)
3 Containment alarm (shuts down power to wells when high level is reached in sump)
4 Power phase alarm (shuts down power when electricity is interrupted or when power phase is lost)
5 Trench alarm (functions similar to well alarms for the leachate trench)
6 Load-Out alarm (shuts down power to loading pump at truck load-out area when high level is reached)

Once tripped, each alarm must be manually re-set. Electricity must also be manually restored. The alarm panel is monitored daily, and the containment sump is tested daily for proper operation.

The alarm system is equipped with a call network that automatically contacts a specified list of operators by telephone. The system is capable of contacting up to 16 individuals. Currently, a list of 7 contacts is programmed into the system. The call is initiated within 30 seconds of alarm activation.

Systems described above are inspected regularly and the results of inspection are documented on the form found in Figure 4

11 Assess the extent that all contributing manufacturing processes, process materials, or generated wastes have varied in the past or may vary in the future

The waste is generated by the accumulation of water which has come in contact with wastes disposed in the landfill. Over time, this leachate is released from the waste due to compression of the waste. The facility has been capped, thereby limiting the amount of storm water that is allowed to infiltrate the waste. Leachate quality is not expected to vary significantly. A comparison of leachate quality from 2000 through 2004 is atttached to demonstrate variability of key parameters over time.

12 Describe how the composition and generation rate of the petititioned waste may periodically vary due to any aspect of manufacturing process variability

Variability in leachate generation rates may vary based on barometric pressure and seasonal precipitation

13 Does a waste treatment process contribute to the petitioned waste?

☐ Yes (Continue with item 14) ☒ No (Skip to item 22)

Contributing Waste Treatment Processes

14 Provide a step-by-step description and schematic of each waste treatment process contributing to the petitioned waste. Include process steps reactions, flow rates, material inputs, waste inputs and output

N/A

15 Describe and identify on the schematic exactly where the petitioned waste is generated (if applicable)

Refer to Figure 1

16 Identify and describe waste inputs and outputs on the schematic and show how each waste is managed

N/A; no waste treatment occurs at the facility

17 Describe all non-process wastes entering the waste treatment processes, including composition, rate of input, and source

N/A; no waste treatment occurs at the facility

18 List and describe all process equipment, including the function of each unit and the ranges of the operating parameters

Please refer to Part 3 Section 10 of the de-listing petition

19 Describe all of your operating cycles (batch cycles, continuous operation, start-up, shut-down, maintenance, cleaning) on a daily, weekly or other period basis as appropriate. Identify periods when process wastes are not generated (plant shutdowns, routine maintenance)

Please refer to Part 3 Section 10 of the de-listing petition

20 Assess the extent that all contributing treatment processes, operations, process materials, or generated wastes have varied in the past or may vary in the future

Variability over time may occur as a function of varying amounts of water introduced into the waste. Over time, the volume of leachate may be reduced as a result of capping of the landfill. The quality is not expected to vary significantly. Evidence of consistency in leachate quality is provided in Table 1. Sample results for selected parameters were compared over a 10 year period to evaluate variability over time.

21 Describe how the composition and generation rate of the petititioned waste may periodically vary due to any aspect of treatment process variability

N/A; no waste treatment occurs at the facility

22 Has the petitioned waste been managed in a land-based unit?

[X] Yes (Continue with item 23) [ ] No (Skip to item 25)

Waste Management Operation

23 Provide the following information for each unit that is (or was) used to manage the petitioned waste

a1 Name of facility: EQ Resource Recovery

Location of facility:
Street / P.O. Box: 36345 Van Born
City: Romulus
State: Michigan **Zip code:** 48174

RCRA ID number: MID 060975844

On-Site facility [ ] [X] **Off-Site facility**

a2 Name of facility: EQ Wayne Disposal

Location of facility:
Street / P.O. Box: 49350 N. I-94 Service Drive
City: Belleville
State: Michigan **Zip code:** 48111

RCRA ID number: MID 048090633

On-Site facility [ ] [X] **Off-Site facility**

b. Description of current unit design and construction
Refer to Appendix A

c. History of unit design
Refer to Appendix A

d. Purpose and description of any unit design changes
Refer to Appendix A

e. Estimated surface area
Refer to Appendix A

f. Estimated unit capacity volume
Refer to Appendix A

g Listing of waste and material inputs which have occurred throughout the life of the unit (if known)

24 Provide detailed schematic of the waste unit showing (as appropriate) unit dimensions, influent point, effluent point and waste thickness

Refer to Appendix A

Process Materials

25 List all materials used in the operations that contribute to the petitioned waste

a Name of material: Leachate (derived from incidental water coming in contact with waste)
Process in which material is used: N/A: leachate generated in non-manufacturing process
Function of material in the process: Waste material only
Approximate annual quantity used: 4,888,111 Units: gallons

26 Provide Material Safety Data Sheets (MSDS) and any other compositional information for trade name and non-elemental materials. Include raw materials, cleaners, oils, solvents, strippers, and any by-products generated by the process

Not applicable

27 Specify the source, quality (recycled, virgin), and quantity of oil, grease, and hydraulic fluid entering the process.

Not applicable

Special Information

28 Are you requesting an up-front exclusion for a waste that is not currently generated but will be in the future?

☐ Yes (Continue with item 29) ☒ No (Skip to item 32)

29 Explain how the bench-scale or pilot scale process demonstration adequately models the full-scale process

N/A: summary of actual data representing waste stream is provided (Appendix B)

30 Explain any real or potential differences between the two processes

31 Describe the impact of those differences on the character of the petitioned waste

32 Are you requesting an exclusion for a waste generated by a multiple waste treatment facility? (MWTF)

☐ Yes (Continue with item 33) ☒ No (Skip to Part 4)

33 Describe your procedure for pre-screening clients and wastes and how this procedure will be carried out should your waste be excluded

34 Describe the procedures by which you will make sure that:

a. Treatment levels needed by an exclusion are maintained
b. A hazardous waste is not disposed improperly as non-hazardous

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PART 4: DELISTING ANALYTICAL PLAN DEVELOPMENT

1 **Provide a complete list of the constituents and parameters of concern identified for your petitioned waste based on appropriate waste constituent analysis and the results of an engineering analysis. Identify those constituents quantified by laboratory analysis and those quantified by mass balance demonstrations.**

Appendix IX parameters were selected for analysis of leachate generated at the Arkona Rooad Landfill

2 **Provide a mass balance demonstration for those constituents of concern in your list for which analyses were not conducted. Provide all calculations and assumptions.**

Analysis for the complete list of Appendix IX parameters was selected based on the nature of the waste. As landfill leachate contacts may different types pf waste material, it was considered prudent to analyze for all compounds. No Appendix IX compounds were, therefore, eliminated from the sampling program

3 **Explain why any other de-listing constituent of concern is not on the constituent of concern list for your petitioned waste**

The Appendix IX list of parameters is a comprehensive collection of constituents of concern. No additional parameters were deemed necessary in evaluating this waste

4 **Explain why you petitioned waste does not exhibit any hazardous waste characteristic for which analysis was not conducted.**

Reactivity is a characteristic defined in 40 CFR 261.23 which cannot be quantified through analytical data.

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PART 5: DELISTING SAMPLE AND ANALYSIS INFORMATION

1 **Has a draft sampling and analysis plan been submitted to the EPA for review before petition preparation?**

[ ] Yes (Answer items 2a and 2b) [X] No (Skip to Item 2)

a. Submittal date of sampling and analysis plan: _____ (month/Date/Year)

b. Log number assigned by EPA to your draft submittal: _____

Waste Sampling Information

2 **Were all sampling related activities performed by in-house staff?**

[ ] Yes (Answer items 2a and 2b) [X] No (Answer Item 2b)

a. Name / address of company responsible for designing the sampling strategy and collecting the samples

Name: Terri L. Zick, CHMM
Street / P.O. Box: 12482 Emerson Drive
City: Brighton
State: MI Zip code: 48116
Telephone Number: 248-486-5100 ext. 232

b. For each individual person (in-house and otherwise) who designed the sampling plan, the quality control plan and/or participated in the sample collection, provide a resume of qualifications and the following information

Name: Terri L. Zick
Affiliation: CTI and Associates, Inc.
Title: Industrial Services Manager

Sampling Strategy

3 **Provide the following information on the sampling strategy you followed to make sure that the samples were representative**

a. Identify which process point discharges, containment areas, or other areas were sampled and why these areas were selected

Samples were collected from the 100,000 gallon storage tank in which the waste is collected and stored prior to discharge to tanker trucks for transportation.

Rationale for selection of sampling point detailed in Part 5, Section 3b (below)

b. Describe the techniques and guidelines used to select waste sampling points (ie. random sampling, fixed transect, offset sampling procedures)

Three potential strategies were evaluated for collection of representative leachate samples.

1. Discrete samplingof 23 leachate wells and 1 leachate collection trench with compositing of samples to create a single representative sample.

2. Collection of grab samples via bailer through the access port at the top of the 100,000 gallon storage tank.

3. Collection of grab samples of leachate via piping approximately 3' from the bottom of the 100,000 gallon storage tank

Collection of discrete samples from individual leachate wells posed representativeness issues based on the fact that the wells do not equally contribute leachate to the waste stream. Several wells produce the majority of leachate volume, while others generate very little leachate. A flow proportional composite would be difficult to produce, The sample would likely, therefore, not accurately represent the overall quality of waste material.

Sampling via bailer through the access port at the top of the tank would potentially provide representative samples of the leachate from all areas of the landfill. The access port is located approximately 25' above the floor of the containment. The logistics of transporting sampling supplies to the sampling location, as well as the safety issues associated with sampling from a small elevated platform resulting in rejecting the port on the top of the tank as a viable sample location.

Option number 3 was selected as the most viable representative sampling location. The leachate available at that point proportionally represents leachate generated at each of the 24 generating locations across the landfill. The tank is not aerated, so artificail volatilization of organics is not an issue. Additionally, waste leaving the site for treatment and disposal comes directly from the storage tank. Leachate is pumped from the tank directly to the transport vehicle for disposal. The leachate obtained from the tank is expected to be highly representative of the material which would be sent off-site for disposal.

c. Describe the sampling and subsampling procedures used during sample collection including the particular days and times selected for sample collection, the number of grab samples collected for each composite sample and why these procedures were used.

Sampling was conducted between July and October, 2004. Sample collection was conducted on days where precipitation did not occur. Weather conditions ranged between 980 with high humidity readings to 450 with low humidity levels. The material collected and stored in the 100,000 gallon storage tank represents a composite of the 24 leachate generation points accross the site. No further compositing of samples was, therefore, deemed necessary. Grab samples were selected as the method by which to adequately represent the leachate characteristics.

d. **Describe the sampling devices used for sample collection and the basis for selecting the devices.**

The sample port used to obtain leachate from the storage tank is a 4" quick connection originally installed to allow connection to a tanker truck for off-loading leachate from the tank. The port was designed to allow gravity flow at relatively high volumes. Sampling requires that the flow rate be reduced to minimize aeration of samples and to allow for efficient collection of leachate in laboratory containers.

A five gallon container was selected to collect a sub-sample of the leachate from the 100,000 gallon storage tank. Prior to sample collection, the bucket was cleaned with Alconox ® and rinsed with leachate obtained from the tank. Leachate used to rinse the bucket was disposed in the secondary containment sump. Leachate was collected in the bucket at a rate of approximately .01 gallons per minute. This slow flow rate was used to ensure that excessive aeration of the waste did not occur. A laboratory cleaned 1 liter amber wide mouth jar was used to transfer the liquid from the bucket to the individual sample containers.

Sample containers were prepared by Trimatrix laboratories. Bottles for inorganic parameters which contained pre-measured preservatives were filled to the base of the neck of the container to ensure that overflow did not occur. Bottles intended for analysis of volatile organic compounds (VOCs) were filled to the base of the bottle neck and the cap of the bottle was used to add additional leachate to form a meniscus on the top without overflowing the container. The cap was placed on the container and the container was inspected to ensure that significant air bubbles were not present.

Sample containers were labeled and dated and placed in a cooler for transport to Trimatrix Laboratories. Sealed bags of ice were placed in the cooler to reduce the temperature to 4^0C during transportation.

e. **Identify and discuss any deviations from your original sampling plan and strategy and the impact of these deviations on waste characterization**

Deviations from the anticipated sampling protocol did not occur

f. **Explain why you believe the samples collected are non-biased and sufficiently represent the waste. (waste uniformity, spatial/temporal variability)**

The 23 leachate wells and 1 leachate trench sump contribute liquid to the waste stream at varying rates. The leachate collected in the 100,000 gallon storage tank represents a flow-proportional representation of the wast stream that is intended to be transported off-site for disposal.

During collection and storage, the leachate is a single phase material which is not expected to vary appreciably based on depth.

4. **How many samples of the petitioned waste were collected?** 3 sampling events*

*a split sample was collected by MDEQ staff during the 10/28/04 event

Is the number of samples taken different from the number of samples agreed upon during the pre-petition meeting?

[X] No [ ] Yes (explain below)

5 For each individual sample collected, please provide the following sample-specific information

a.

Sample ID	Sample Date	Composite/Grab	Purpose of Sample
36650-1	July 20, 2004	Grab	represent waste character
36650-2	October 4, 2004	Grab	represent waste character
36650-3	October 28, 2004	Grab	represent waste character

b.

Sample ID	Collection Point	Grab volume	# Grabs / Composite	Total Sample volume	Sample Collection Method
36650-1	Tank sample port	8 liters	11	8 liters	grab
36650-2	Tank sample port	8 liters	11	8 liters	grab
36650-3	Tank sample port	8 liters	11	8 liters	grab

c. Describe the general sampling location (ie. quadrants) and specific sampling points (may refer to numbered sampling points on a diagram)

Refer to location "1" on Figure 1

d. Describe how each sample was composited

Samples were grabs; no composite generated (See Part 5 Section 3b for discussion)

e. Provide a physical description of each sample at time of collection

Sample ID	Sample color	Sample odor	Other Description
36650-1	light gray	mild	N/A
36650-2	medium gray	mild	N/A
36650-3	light gray	mild	N/A

f. For each composite sample, specify the time and date when the grab samples were collected and the time and date when the samples were composited (as applicable)

Sample ID	Sample Date/Time	Compositing Date/Time	Other Comments
N/A			

g. Describe the handling and preparation techniques used for each sample (types of containers, container preparation, types and amount of preservatives)

Refer to Appendix C

Other General Information

6 Describe the weather conditions during sampling (if conducted outdoors)

Refer to Appendix C

7 Describe any facility activities separate from sampling that occurred at the same time that might have affected sample representativeness

N/A; the facility is a closed site

8 Describe the sampling device decontamination and note when disposal devices were used for sample collection

The sampling device was cleaned and prepared at Trimatrix Laboratories as described in Part 5 Section 3d

9 Were chain of custody procedures specified in SW-846 followed?

[X] Yes (Skip to Item 11) [ ] No Continue with Item 10)

10 Provide a description of the quality control procedures and documentation system used to track sample location and maintain sample integrity during transportation to the laboratory

Refer to Appendix C

Localized Areas of Contamination

11 Have you collected samples to characterize a localized area of contamination (hot spot) within the petitioned waste?

[ ] Yes (Continue with Item 12) [X] No (Skip to Item 16)

12 Discuss your basis for believing a hot spot may or does exist

13 Describe the known or predicted location (on a diagram) and the dimensions of the hot spot

14 Identify the samples specifically collected to characterize the hot spot

15 Explain why the samples sufficiently represent the hot spot

Multiple Waste Treatment Facility

16 Have you collected samples to characterize a waste generated by multiple waste treatment facility?

☐ Yes (Continue with Item 17) ☒ No (Skip to Item 21)

17 List and describe the untreated wastes that were treated and are represented by the treatment residue samples collected during the sampling period

18 Provide the percentage of total wastes treated annually that was represented by the sampling period

19 List and briefly describe the untreated wastes that also are treated at the facility but were not represented by the sample

20 Explain why the wastes not represented by the sampling period are not expected to contain any other hazardous constituents of concern, different levels of constituents of concern or other different characteristics than that represented by the sampling period

Waste Analysis Information

21 Was sample analysis done by in-house staff?

☐ Yes (Answer Items 21a and 21b) ☒ No (Skip to Item 21b)

a. Name / address of company responsible for sample analysis

Name: Trimatrix Laboratories
Street / P.O. Box: 5560 Corporate Exchange Court SE
City: Grand Rapids
State: MI Zip code: 49512
Telephone Number: (616) 975-4500

For each individual person (in-house and otherwise) who conducted analysis or was responsible for data reduction, validation and laboratory quality control, provide a resume of qualifications and the following information

Name: Walt Roudebusch
Affiliation: Trimatrix Laboratories
Title:

Name: Jennifer Rice
Affiliation: Trimatrix Laboratories
Title: Project Chemist

22 Provide your signed laboratory data reporting forms from all analyses, including results from quality control analyses

Refer to Appendix B

23 Provide the following information on each sample and analysis

Refer to Appendix B

24 Provide the names and model numbers of all equipment used during analysis

Refer to Attachment B

25 Provide all information necessary to fully interpret the test procedures or results

Refer to Attachment B

26 For each quality control analysis that involved a matrix or a surrogate spike and spike duplicate analysis, provide the following information:

Refer to Attachment B

27 Identify whether the waste analytical data was corrected based on quality control results (blanks) and explain how the correction was made

No corrections made based on QA/QC data

28 **Explain any inconsistencies or deviations found in the reported analytical results. The discussion should include any observed analytical interferences and what actions were taken to resolve the problems.**

Not applicable

29 **If any calculations are necessary (ie. use of oily waste extraction procedure, for the mobile metal concentration) Include calculation sheets**

Not applicable

WASTE DELISTING PETITION
ARKONA ROAD LANDFILL

PART 6: DELISTING GROUNDWATER MONITORING INFORMATION

1 Show which of the following describes the management of the petitioned waste

[X] a. The petitioned waste is currently managed in a land based waste management unit (on-site or off-site), and groundwater monitoring is needed under 40 CFR Part 264 or 265 or authorized state equivelent, or other federal state or local requirements or if groundwater monitoring information is otherwise available for the unit.
(Go to Item 2)

[ ] b. The petitioned waste was once (but no longer) managed in a land based waste management unit (onsite or offsite), and groundwater monitoring is needed under 40 CFR Part 264 or 265 or authorized state equivelent, or other federal state or local requirements or if groundwater monitoring information is otherwise available for the unit.
(Go to Item 2)

[ ] c. The petitioned waste is currently managed or was once managed in a land based waste management unit, but groundwater monitoring requirement has been waived
(Go to Item 9)

[ ] d. The petitioned waste is currently managed or was once managed in one or more land based waste management units containing also significant amounts of other wastes, and you consier groundwater data from these non-dedicated units are immaterial in evaluating the petitioned waste's impact on groundwater quality
(Go to Item 10)

[ ] e. None of the above management scenarios apply
(Go to Item 11)

2 Has the appropriate responsible party previously submitted groundwater monitoring information for the subject units to an EPA Regional Office or an authorized state in response to 40 CFR Part 264 or 265 requirements?

[X] Yes (Continue with Item 3) [ ] No (Skip to Item 5)

3 Do you wish that we directly get the groundwater monitoring information from the EPA Region or State?

[X] Yes (Complete Item; and continue with Item 6) [ ] No (Skip to Item 5)

4 Indicate the EPA or State contact for getting the groundwater monitoring information:

Contact name: _____
Affiliation: _____
Title of report (if applicable): _____
Street / P.O. Box: _____
City: _____

State: _____ Zip code: _____
Telephone Number: _____

5 Provide all available and relevent groundwater monitoring information and reports, which, at a minimum should include:

a. Description of site geology
b. Description of the groundwater monitoring system for the units in which the petitioned waste is or was managed
c. Results obtained from the analysis of groundwater samples
d. Discussion of sampling and analytical procedures followed in getting and analyzing the groundwater samples
e. Any additional information necessary to characterize the petitioned waste's impact on groundwater quality
f. An analysis and discussison of whether the above-listed information and data that show contamination of the groundwater is attributable to the petitioned waste.

based disposal unit into which residue from the petitioned waste has been disposed are attached in Appendix A. Site groundwater monitoring reports are currently available in MDEQ files.

6 Is the unsaturated (vadose) zone monitored at any of the subject units?

[ ] Yes (Continue with Item 7) [X] No (Skip to Item 8)

7 Provide the following information on vadose zone monitoring (lysimeter information) in as much detail as possible

a. Description of regional, local and unit specific geology, hydrogeology and soil characteristics
b. Description of the monitoring system design and construction
c. Description of the sampling and analytical procedures followed
d. Analytical and QC data obtained from sample analysis
e. Interpretation of the data and information presented

8 Discuss whether groundwater contamination exists on the site, and if it does, identify the source. If the source is not the petitioned waste, explain, with supporting information , why the petitioned waste has not contributed to the contamination

9 Provide documentation on the waiver or exemption of groundwater monitoring at the land-based management unit containing the petitioned waste

N/A

10 Identify the units in question, provide estimates of the relative volumes of the petitioned and other wastes disposed in the units, and discuss in detail why you consider groundwater data from these non-dedicated units are immaterial in evaluating the petitioned waste's impact on groundwater quality

11 Discuss why groundwater monitoring is not needed for your petitioned waste